

Semiconductor Detectors**Posters 1-36**

- 1 **Performance and Longevity Studies of the Silicon Detectors of the CDF Experiment,**
Alexander Sukhanov, University of Florida
2. **The Effect of the Dielectric Layer Thickness and Permittivity on Spectral**
Performance of CdZnTe Gamma Ray Spectrometers, *Alireza Kargar, S.M.A.R.T.*
Laboratory, Kansas State University
3. **Silicon on Insulator Radiation Detectors for Microdosimetry and Other Applications,**
Anatoly B. Rosenfeld, University of Wollongong
- 4 **Characterization of CZT Interconnects Using Scanning Acoustic Microscopy,** *Charles*
G. Woychik, GE Global Research
- 5 **Studies of the Silicon Neutron Sensor Characteristics,** *Igor E. Anokhin, Institute for*
Nuclear Research, Kiev, Ukraine
- 6 **Characterization of the X-Ray Spectroscopic Performance of a Very Large Area**
Silicon Drift Detector , *Gianluigi Zampa, INFN Sezione di Trieste*
- 7 **Performance of 3-D CdZnTe Detectors using BNL-H3D ASIC Readout System,** *Cedric*
Herman, University of Michigan, Nuclear Engineering and Radiological Sciences
- 8 **Energy Resolution of Canberra HPGe Detectors above 3 MeV for Active**
Interrogation Applications, *Ionel Dragos Hau, Canberra Industries, Inc.*
- 9 **Neutron Responses of 6H-SiC and 4H-SiC Semiconductor Detectors for Fast**
Neutrons, *Jang Ho Ha, Korea Atomic Energy Research Institute*
- 10 **Fluence Dependent Recombination Characteristics in Heavily Irradiated by Neutrons**
and Protons Si for Ionizing Radiation Detectors, *Juozas Vaitkus, Vilnius University;*
Eugenijus Gaubas, presenting
- 11 **High-Resolution Electron-Track Measurements for Advanced Compton Imaging,** *K.*
Vetter, UC Berkeley; B. Plimley, presenting
- 12 **Characterization of Amorphous Selenium for Medical Imaging and Nuclear**
Detectors, *Krishna C. Mandal, EIC Laboratories, Inc.*
- 13 **MOVPE Growth of CdTe on Si Substrates for Gamma Ray Detector Fabrication,**
Madan Niraula, Nagoya Institute of Technology
- 14 **The Long Term Stability of the TlBr Detector Using Guard Ring and Without Surface**
Etching Treatment, *Margarida Mizue Hamada, Instituto de Pesquisas Energeticas e*
Nucleares (IPEN/CNEN-SP, Brazil)
- 15 **An Investigation of Nanocrystalline Semiconductor Assemblies as a Material Basis for**
Ionizing-Radiation Detectors, *Mark Hammig, University of Michigan; Kihyun Kim,*
presenting
- 16 **Neutron Detectors Based Upon Artificial Single Crystal Diamond,** *Maurizio Angelone,*
Associazione EURATOM-ENEA sulla Fusione, ENEA
- 17 **Composite Polycrystalline Boron Nitride, Boron Carbide and Lithium Fluoride Based**
Alpha and Neutron Detectors, *Michael Roth, The Hebrew University of Jerusalem;*
Michael Schieber, presenting
- 18 **X-ray Beam Intensity Monitor Using CVD Single Crystal Diamond Detector,** *Nicola*
Tartoni, Diamond Light Source Ltd.
- 19 **Irradiation Studies with the CMS Forward Pixel Detector and Upgrade Proposal for**
SLHC, *Ping Tan, Fermilab; Simon Kwan (Fermilab), presenting*
- 20 **Fast Neutron Detection With Silicon Carbide Semiconductor Radiation Detectors,**
Robert W. Flammang, Westinghouse Science & Technology Department, Pittsburgh, PA
- 21 **Ion Impact Detection and Micromapping with a SDRAM for IEEM Diagnostic and**
Applications, *Serena Mattiazzo, University of Padova, Dept. of Physics and INFN Padova;*
Piero Giubilato, presenting

- 23 **Characterization of Pixellated TlBr Radiation Detectors for Gamma-Ray Spectroscopy**, *Suzanne Nowicki, University of Michigan*
- 24 **Correlation of Proton and Photon Induced Conductivity of a Poly(p-phenylene vinylene) Derivative**, *Tiffany MS Wilson, Sandia National Laboratories (SNL)*
- 25 **New Two-Dimensional Solid State Pixel Detectors with Dedicated Front-End Integrated Circuits for X-ray and Gamma-Ray Imaging**, *Tumay Tumer, NOVA R&D, Inc.*
- 26 **Effects of Point Defects on the Electrical Properties of Aluminum Antimonide -- a First Principles Investigation**, *Vincenzo Lordi, Lawrence Livermore National Lab (LLNL)*
- 27 **Effects of Depth Resolution on Spectroscopic Performance of Pixellated CdZnTe Detectors**, *Willy Kaye, University of Michigan*
- 28 **Characterization of Massive Silicon Detectors for Low Energy Events at Liquid Helium Temperature**, *C Braggio, University of Padova*
- 29 **Neutron Damage Effects in SSB and CZT Radiation Detectors for Spent Fuel Facility Monitoring**, *Han-Soo Kim, Korea Atomic Energy Research Institute (KAERI)*
- 30 **TlBr Stack Detectors for Gamma-ray Spectroscopy**, *Keitaro Hitomi, Tohoku Institute of Technology*
- 31 **Gamma-ray Response of Cl-doped Semi-Insulating CdMnTe Crystal**, *KiHyun Kim, Korea University*
- 32 **Characterization of a Large Volume CdZnTe Coplanar Detector**, *Mohini Rawool-Sullivan, Los Alamos National Laboratory (LANL)*
- 33 **Investigation of the Importance of the Contact in Performance of CZT Radiation Detectors at Various Temperatures**, *Se-Hwan Park, Korea Atomic Energy Research Institute (KAERI)*
- 34 **New Silicon Quantum Photon Detector Structures and Performance**, *Xavier Clairardin, Kotura Inc; Dawei Zheng, presenting*
- 35 **Development of Amorphous Semiconductors for Radiation Detection Applications**, *Bradley R. Johnson, Pacific Northwest National Laboratory (PNNL)*
- 36 **Effects of the Extended Defects in CZT using a Synchrotron X-ray Beam**, *Giuseppe Camarda, Brookhaven National Laboratory (BNL)*

Gas, Liquid, and Cryogenic Detectors

Posters 37-49

- 37 **Cryogenics for the LUX Detector**, *Alexander Bolozdynya, Case Western Reserve University (CWRU)*
- 38 **Next Generation TRD for the CREAM: Construction and the TRD Prototype Beam Test Results**, *Alexander Malinin, Inst. for Phys. Sci. and Tech. (IPST), University of Maryland (UMD) (M.H. Lee, presenting)*
- 39 **Comparison of the Characteristics of He-3 and He-4 Proportional Chambers**, *Dong Hoon Lee, Department of Nuclear Engineering, Hanyang University*
- 40 Withdrawn
- 41 **Electrostatic Detection of Radioactive Materials**, *Jeffrey W. Griffin, Pacific Northwest National Laboratory (PNNL)*
- 42 **High Pressure Operation of the Photon-Assisted Cascaded Electron Multiplier**, *Joao Veloso, Physics Department, University of Aveiro, Portugal*
- 43 **Frequency-Domain Multiplexed Superconducting Gamma-Ray Spectrometer**, *Jonathan Dreyer, Lawrence Livermore National Laboratory (LLNL)*
- 44 **Examination of Matsushita High Density Aerogel**, *Lucien Cremaldi, University of Mississippi*

- 45 **Evaluation Of Lithium Gadolinium Borate Capture-Gated Spectrometer Neutron Efficiencies**, *Nabil Mena, Canberra (An AREVA Company)*
- 46 **Gas Mixture Studies for Streamer Operation of RPCs**, *Paoloni Alessandro, INFN - LNF (Laboratori Nazionali di Frascati)*
- 47 **Development of the DT-GEM: a Gas Electron Multiplier Detector for Neutron Diagnostics in Controlled Thermonuclear Fusion**, *Rosaria Villari, ENEA Fusion Division C.R. Frascati*
- 48 **Design of a New Microdosimetry Detector Based On Thick Gas Electron Multiplier**, *Soo Hyun Byun, McMaster University*
- 49 **Cryogenic Rare Earth Manganite Bolometers for Total Energy Measurements of the Linac Coherent Light Source Free Electron Laser**, *Stephan Friedrich, Lawrence Livermore National Laboratory; Owen B. Drury, presenting*

Electronics and Systems
Posters 51-72

- 51 **On-Chip Fast Data Sparsification for a Monolithic 4096-Pixel Device**, *Alessandro Gabrielli, INFN Bologna*
- 52 **The Data Readout System of Nuclear Compton Telescope (NCT)**, *Chih-hsun Lin, National Space Organization, Taiwan*
- 53 **Architecture of a Slow-Control ASIC for Future High-Energy Physics Experiments at S-LHC**, *Alessandro Gabrielli, INFN Bologna*
- 54 **An All-Digital Coincidence Detection System for a Large RPC-PET Camera**, *Custodio F. M. Loureiro, Department of Physics - University of Coimbra; Filomena M. C. Clemêncio, presenting*
- 55 **High Count Rate Neutron Spectrometry with Liquid Scintillation Detectors**, *Daniele Marocco, ENEA C.R. Frascati*
- 56 **Withdrawn**
- 57 **A Low Energy Neutron Detector Array at NSCL**, *Georgios Perdikakis, NSCL, Michigan State University*
- 58 **A Novel CMOS Monolithic Active Pixel Sensor with Analog Signal Processing and 100% Fill Factor**, *Giulio Villani, Rutherford Appleton Laboratory (RAL)*
- 59 **Nuclear Pulse Height Measurement Using Vernier TDC**, *H.P. Chou, National Tsing Hua University; P. H. Hsueh, presenting*
- 60 **The Role of Offset and Gain Corrections in Digital Radiography Detectors over the Working Lifetime**, *Ho Kyung Kim, Pusan National University*
- 61 **Development of Multifunctional Pulse Processing Device in Nuclear Spectroscopy**, *HongJoo Kim, Kyungpook National Univ.*
- 62 **A Multi-Frame, Megahertz CCD Imager**, *Jacob A. Mendez, Los Alamos National Laboratory (LANL)*
- 63 **Front-end Electronics and Preamplifiers for Compact Arrays of Germanium Gamma-ray Spectrometers**, *John L. Orrell, Pacific Northwest National Laboratory (PNNL)*
- 64 **Research and Development of the Humanitarian Landmine Detection System by a Compact Fusion Neutron Source**, *Kai Masuda, Institute of Advanced Energy, Kyoto University*
- 65 **Low Energy Measurements using the CsI(Tl) Crystal Coupled to photodiodes in Coincidence-Sum Circuitry**, *Margarida Mizue Hamada, Instituto de Pesquisas Energeticas e Nucleares (IPEN/CNEN); Carlos Henrique de Mesquita, presenting* (IPEN/CNEN)

- 66 **High Spatial and Temporal Resolution Neutron Imaging with Microchannel Plate Detectors**, *Oswald Siegmund, University of California, Berkeley*
- 67 **A Novel Independent Channel, Smart Triggering Readout Electronics for Single Photon Imaging Applications**, *Paolo Musico, INFN - Genova*
- 68 **Optimal Digital Pulse Processing for Radiation Detection Systems**, *Paul A. B. Scoullar, Southern Innovation, Melbourne, Australia*
- 69 **Prototype Large-Angle Photon Veto Detectors for the NA62 Experiment at CERN**, *Riccardo Fantechi, INFN - Sezione di Pisa*
- 70 **Characterizing and Correcting the Cross-Talk Effects on Depth Measurements in the NCT Detectors**, *Zong-Kai Liu, National Central University, Jhongli, Taiwan*
- 71 **Novel Approaches to Radiation Detection and Readout by Exploiting the Latchup Effect**, *Villani Enrico Giulio, STFC Rutherford Appleton Laboratory*
- 72 **Development of Embedded DAQ System for Beam Monitoring**, *YongSeok Hwang, Kyungpook National Univ.*

National and Homeland Security Applications

Posters 76-98

- 76 **Energy and Spatial Resolution Study of Thick Sodium Iodide Gamma Cameras for Standoff Applications**, *Adrian Ivan, GE Research*
- 77 **Measurement of Fast Neutron/Gamma-Ray Cross-Correlation Functions with a Pu-Be Source**, *Andreas Enqvist, Chalmers University of Technology*
- 78 **Calculation of NRF Scattering Rate for Security Inspection**, *B.G. Park, Seoul National University; H.D. Choi, presenting (Seoul National University),*
- 79 **Withdrawn**
- 80 **Passive Scanning of Occupied Passenger Vehicles**, *Chris Morris, Los Alamos National Laboratory (LANL)*
- 81 **Development of a Neutron Spectrometer using Spontaneous Fission Associated Particle (AP) and Double Neutron Scatter (DSNS) Techniques**, *Istvan Dioszegi, Brookhaven National Laboratory (BNL)*
- 82 **Cs₂LiYCl₆:Ce Scintillator for Nuclear Monitoring Applications**, *Jarek Glodo, RMD*
- 83 **Compton Imaging for Safety and Security**, *Laurel Sinclair, Geological Survey of Canada, Natural Resources Canada*
- 84 **Toward Practical Monitoring of Commercial Power Reactors with Antineutrinos**, *Lorraine Sadler, Sandia National Laboratories*
- 85 *Withdrawn*
- 86 **Neutron Background Measurements at Fission Energies**, *Nicholas Mascarenhas, Sandia National Laboratories, Livermore (SNL-L)*
- 87 **Ship-Effect Neutron Impacts on Screening at Borders**, *Richard Kouzes, Pacific Northwest National Laboratory (PNNL)*
- 88 **Identification of Neutron Sources by Spectral Analysis of Pulse-Height Distributions**, *Senada Avdic, University of Tuzla; Sara A. Pozzi, presenting, (University of Michigan)*
- 89 **Determination of Source Shielding Using 3-D CZT Imaging Detectors**, *Weiye Wang, University of Michigan*
- 90 **Improvement of SNM Detection Performance by Fusion of Data from Multiple Inspection Systems**, *Willem G. J. Langeveld, Rapiscan Systems, Inc.; Timothy J. Shaw, presenting*

- 92 **Thermal Neutron Die-Away Studies in a 14-MeV Neutron-Based Active Interrogation System**, *Willem G.J. Langeveld, Rapiscan Laboratories, Inc.; Ryan Yee, presenting*
- 93 **Withdrawn**
- 94 **Poisson Statistical Methods for the Analysis of Low-Count Gamma Spectra**, *John Kirkpatrick, Canberra Industries, Inc.*
- 95 **Time-interval Probability Analysis for Radiation Monitoring**, *Peng Luo, Clemson University*
- 96 **Application of a Self-Multiplication Correction Method to a Neutron Coincidence Counter and Its Calibration for Spent Fuel**, *Tae-Hoo Lee, Korea Atomic Energy Research Institute*
- 97 **Evaluation of Commercial Spectral Personal Radiation Detectors (SPRDs)**, *R. Arlt, International Atomic Energy Agency (IAEA)*
- 98 **Ottawa Valley Xe-133 Plume Modelling and Detection**, *Ed Korpach, Health Canada, Radiation Protection Bureau*

Radiation Sources
Posters 100-107

- 100 **Production of an Associated Particle Neutron Generator with ZnO:Ga Alpha-Detector**, *Steven Z. Kane, Purdue University; David S. Koltick, presenting*
- 101 **Development of a RF-driven Neutron Generator for Associated Particle Imaging**, *Ying Wu, Lawrence Berkeley National Laboratory (LBNL)*
- 102 **Compact Portable Microwave-driven Neutron Generator**, *Qing Ji, Lawrence Berkeley National Laboratory (LBNL)*
- 103 **Measurement of the Neutron Yield of DD and DT Neutron Generators**, *David Chichester, Idaho National Laboratory (INL)*
- 104 **Ultra-compact Field Desorption Neutron Source**, *Ying Wu, Lawrence Berkeley National Laboratory (LBNL)*
- 105 **Development of a D-D Neutron Generator Using a Titanium Drive-in Target**, *I.J. Kim, Seoul National University; H.D. Choi, presenting*
- 106 **A New Method of Tunable Gamma-ray with a Fixed Energy Electron Beam**, *Hideaki Ohgaki, Institute of Advanced Energy, Kyoto University*
- 107 **A 12 MeV Gamma Source for Active Interrogation**, *Bernhard Ludewigt, Lawrence Berkeley National Laboratory (LBNL)*

Algorithms and Modeling
Posters 111-133

- 111 **Numerical Simulations of Pillar Structured Solid State Thermal Neutron Detector**, *Adam M. Conway, Lawrence Livermore National Laboratory (LLNL)*
- 112 **Application of GEANT4 to the Simulation of Microcalorimeter Detectors**, *Andrew Hoover, Los Alamos National Laboratory (LANL)*
- 113 **Increasing Detection Sensitivity within Compton Imaging Systems using Model-Based Signal Decomposition Methods**, *Daniel H. Chivers, University of California, Berkeley*
- 114 **RadSrc: Calculating Gamma-ray Signatures from Aged Mixtures of Heavy Nuclides**, *Douglas Wright, Lawrence Livermore National Laboratory (LLNL)*
- 115 **Positive SNM Gamma Detection Achieved through Synthetic Enhancement of Sodium Iodide Detectors**, *G. E. Sjoden, University of Florida NRE/FINDS*

- 116 **A Novel Approach to assess the Spatial Resolution of Position Sensitive Detectors equipping 2D Neutron Tomographic Systems** , *Gevaldo Lisboa de Almeida, Instituto de Engenharia Nuclear - CNEN / Brazil (Ricardo Tadeu Lopes, presenting)*
- 117 **Computer-Aided Detection of Solitary Pulmonary Nodules on MDCT Images with One-Dimensional Morphologic Matching Algorithm**, *Hosang Jeon, Korea Advanced Institute of Science and Technology*
- 118 **Validation of GEANT4 Electromagnetic Physics Models for the Evaluation of Proton Computerized Tomography**, *Hugo Schelin, Federal University of Technology - Parana*
- 119 **Theoretical Study of Proton-Nucleus Interactions via Monte Carlo Multicollisional Intranuclear Cascade Model Plus Evaporation/Fragmentation Processes in ^{28}Si** , *Joel Mesa Hormaza, Instituto de Biociencias de Botucatu (IBB-UNESP), Brazil*
- 120 **Extended Radiation Source Imaging with the Prototype Compton Imager**, *John P. Sullivan, Los Alamos National Laboratory (LANL)*
- 121 **Hyperspectral Imaging with Wavelet Transform for Colon Tissue Biopsy Samples** , *Khalid Masood, University of Warwick, UK*
- 122 **GEANT4 Simulation of a Cosmic Ray Muon Tomography System with Micro-Pattern Gas Detectors for the Detection of High Z Materials** , *Kondo Gnanvo, Florida Institute of Technology*
- 123 **The Atomistic Simulation of Thermal Diffusion and Coulomb Drift in Semiconductor Detectors** , *Manhee Jeong, University of Michigan*
- 124 **RADMAP, An Imaging System for Gamma-ray Mapping and Density Profiling**, *Mitchell Woodring, Pacific Northwest National Laboratory (PNNL)*
- 125 **Robust Optimization Techniques for Respiratory Motion Registration**, *Rangika Abeygunasekera, University of Surrey, Guildford UK*
- 126 **On the Benefits of Partitioning Detector Elements in Large-Area NaI(Tl)-Based Detection Systems**, *Scott D. Kiff, Pacific Northwest National Laboratory (PNNL)*
- 127 **Compton Imaging Using 3-Dimensional List-Mode Maximum Likelihood Expectation Maximization (3DMLEM)**, *Shawn Tornga, Los Alamos National Laboratory (LANL)*,
- 128 **Contextually Aware Nuclear Evaluation System**, *Simon Labov, Lawrence Livermore National Laboratory (LLNL)*
- 130 **Few-View Projection Reconstruction with the Iterative Reconstruction-Reprojection Algorithm and TV Constraint**, *Xinhui Duan, Tsinghua University*
- 131 **Design of a Hybrid Gamma-Camera with LaBr₃**, *Yuxin Feng, University of Florida*
- 132 **Fast X-ray Phase-Contrast Imaging using High Resolution Detector**, *Zhentian Wang, Department of Engineering Physics, Tsinghua University*
- 133 **Digital Image Restoration Based On Simultaneous Pixels Detection Probabilities**, *Varlen Grabski, Instituto de Fisica Universidad Nacional Autonoma de Mexico*

Photodetectors
Posters 136-147

- 136 **Development of Picosecond-Resolution Large-Area Time-of-Flight Systems**, Camden Ertley, *University of Chicago*
- 137 **A Detection System Based on Nuclear Resonance Fluorescence Technique**, Haori Yang, *University of Michigan*
- 138 **Design and Simulation Result of n Substrate Reverse Type Avalanche Photodiode**, HongJoo Kim, *Kyungpook National University*; M. H. Moon, *presenting*
- 139 **Silicon Photomultipliers for PET/MRI Application**, Joseph Stevick, *Wolfson Brain Imaging Centre, University of Cambridge*
- 140 **Evaluation of Silicon Detectors with Built In JFET for Biomedical Applications**, Mitra Safavi-Naeini, *University of Wollongong*
- 141 **A Si-APD Timing Detector Sensitized by Secondary Radiation, for Nuclear Resonant Scattering using Synchrotron X-Rays**, Shunji Kishimoto, *Photon Factory, High Energy Accelerator Research Organization*
- 142 **High-Resolution Monolithic CMOS Sensor Systems for Charged-Particle Imaging**, Stuart Kleinfelder, *University of California, Irvine*
- 143 **Modeling and Analysis of Charged-Particle CMOS Image Sensor Arrays**, Stuart Kleinfelder, *University of California, Irvine*
- 144 **Low-Noise CMOS Sensors for Charged-Particle Imaging using Per-Pixel Correlated Double Sampling**, Stuart Kleinfelder, *University of California, Irvine*
- 145 **A High-Speed, High Dynamic-Range, Linear Optical Sensor Array**, Stuart Kleinfelder, *University of California, Irvine (Moved to oral session Wednesday PM I: Bechtel-4)*
- 146 **New Approach to Solid State Photomultipliers**, D. Shushakov, *Amplification Technologies, Inc, USA*
- 147 **High Quantum Efficiency PMT for Field Homeland Security Instruments**, Maciej Kapusta, *Photonis France SAS*

Scintillators
Posters 150-181

- 150 **Electronic Structure Studies and Predictions for new Ce-doped Gamma Detector Materials**, Andrew Canning, *Lawrence Berkeley National Laboratory*
- 151 **First Principles Calculations for Ce-doped Rare-Earth Oxyhalides REOX (RE = Y,La, X = F, Cl, Br, I) for Gamma Detector Materials**, Anurag Chaudhry, *Lawrence Berkeley National Laboratory (LBNL) and UC Davis*,
- 152 **Scintillation Properties of the Novel Single Crystal Cerium Dicyanoargentate**, Christie L. Larochelle, *Franklin & Marshall College*
- 153 **Properties of vacuum deposited CsI(Tl) and ZnSe(Te) scintillator layers**, A. Fedorov, *Institute for Scintillating Materials, NAS of Ukraine*; A. Gektin, *presenting*
- 154 **Comparative Study on the Crystallization Behavior and Luminescence Properties Between LSO and LPS Crystals**, Guohao Ren, *Shanghai Institute of Ceramics, Chinese Academy of Sciences*
- 155 **An Investigation of the Effects of Calcium Codoping in YSO:Ce**, Harold Rothfuss, *Scintillation Material Research Center, University of Tennessee*
- 156 **Trends in the Electronic Structures of Halide Scintillators**, Hiroyuki Takenaka, *Oak Ridge National Laboratory*

- 157 **Influence of Different Defects on Radiation Stability of Cadmium Tungstate Single Crystals**, *I. Tupitsyna, Institute for Scintillation Materials of STC "Institute for single crystals," Ukraine; B.Grinyov, presenting*
- 158 **Knowledge-based Estimation of Electronic Properties in Ternary Materials**, *Kim F Ferris, Pacific Northwest National Laboratory (PNNL)*
- 159 **Development and Characterization of Two-dimensional Scintillating Fiber-optic Dosimeter for High Energy Electron Beam Therapy**, *Kyoung Won Jang, Konkuk Univ., Korea*
- 160 **CeCl₃(CH₃OH)₄ - Cerium Chloride-Methanol Adduct Single Crystals: A New Metal-Organic Scintillator Material**, *L. A. Boatner, ORNL Center for Radiation Detection Materials and Systems*
- 161 **Cherenkov and Scintillation Properties of Cubic Zirconium**, *Mark Christl, NASA Marshall Space Flight Center (MSFC)*
- 162 **Characterization of Large Frustum CsI(Tl) Crystals for the R3B Calorimeter**, *Martin Gascon, University of Santiago de Compostela*
- 163 **The Effect of Calcium Codoping on Praseodymium Doped LSO**, *Merry Spurrier, University of Tennessee; Kan Yang, presenting*
- 164 **Characterization of Scintillation Crystal BaCl₂ at Low Temperature**, *Minjeong Kim, Kyungpook National University*
- 165 **Development of Radiation Detectors Based on II-VI Compounds**, *N. Starzhinskiy, Institute for Scintillation Materials, Ukraine (ISM)*
- 166 **Problems of Manufacturing Nanocrystalline Yttrium Silicate Materials**, *Nadaraia Lili, Technical University of Georgia*
- 167 **On Radiation-induced Processes in GSO:Ce Crystals**, *N. Starzhinskiy, Institute for Scintillation Materials (ISM), Ukraine*
- 168 **Peculiarities of Cascade Photon Emission and Energy Storage in M_{1-x}Pr_xF_{2+x} (M=Ca, Sr, Ba) Crystals**, *Natali Shiran, Institute for Scintillation Materials (ISM)*
- 169 **Cerium and Yttrium Distributions in LSO crystals and their Influence to Optical and Scintillation Properties**, *Rihua Mao, California Institute of Technology*
- 170 **Cerium Activated Scintillation in Yttrium Halides: First Principle Theory and Prediction**, *Rostyslav Boutchko, Lawrence Berkeley National Laboratory (LBNL)*
- 171 **Crystal Growth and Scintillation Properties of Rb₂CeBr₅**, *Sunghwan Kim, Daegu Health College (Korea)*
- 172 **Characterization of Cerium Fluoride Nanocomposite Scintillators for Neutron Capture Measurements**, *Sy Stange, Los Alamos National Laboratory*
- 173 **Luminescence of LuCl₃:Pr³⁺ under interconfigurational (4f² → 4f¹5d¹) and band gap excitation**, *Uwe Happek, The University of Georgia*
- 174 **Measurement of Integral Efficiency in Detection of Fast Neutron Fluxes Using Inorganic Scintillators**, *V.D. Ryzhikov, Institute for Scintillation Materials of NAS of Ukraine*
- 175 **Fast, Low Afterglow Liquid and High Optical Index Scintillators for Fast-Neutron Spectroscopy and Imaging Applications**, *Volker Dangendorf, Physikalisch-Technische Bundesanstalt (Germany),*
- 176 **Scintillation Properties of Large Area Composite Stilbene Crystal for Neutron Detection**, *Yun Ho Cho, Hanyang University,*
- 177 **Large Volume ZnWO₄ Crystal Scintillator with Excellent Energy Resolution and Low Background**, *L.L. Nagornaya, Institute for Scintillation Materials, Ukraine (ISM); B.V. Grinyov, presenting*
- 178 **Fabrication of a Coherent Fiber-Optic Bundle Sensor Using Organic Scintillating Fibers for High Dose Rate Brachytherapy**, *Sang Hun Shin, Konkuk University, Korea,*

- 179 **The Growth and Scintillation Characteristics of CsI:CO₃ Single Crystals**, *HongJoo Kim, Kyungpook National University; ShinJung Ha, presenting*
- 180 **Temperature Dependency of a Semi-insulating GaAs Radiation Detector for Alpha-Ray**, *S. M. Kang, Korea Atomic Energy Research Institute (KAERI)*
- 181 **Performance Characteristics for Thick Scintillator Flat Panel Detectors**, *McDevitt, Daniel B., GE Global Research*

Research, Medical, Environmental And Industrial Applications

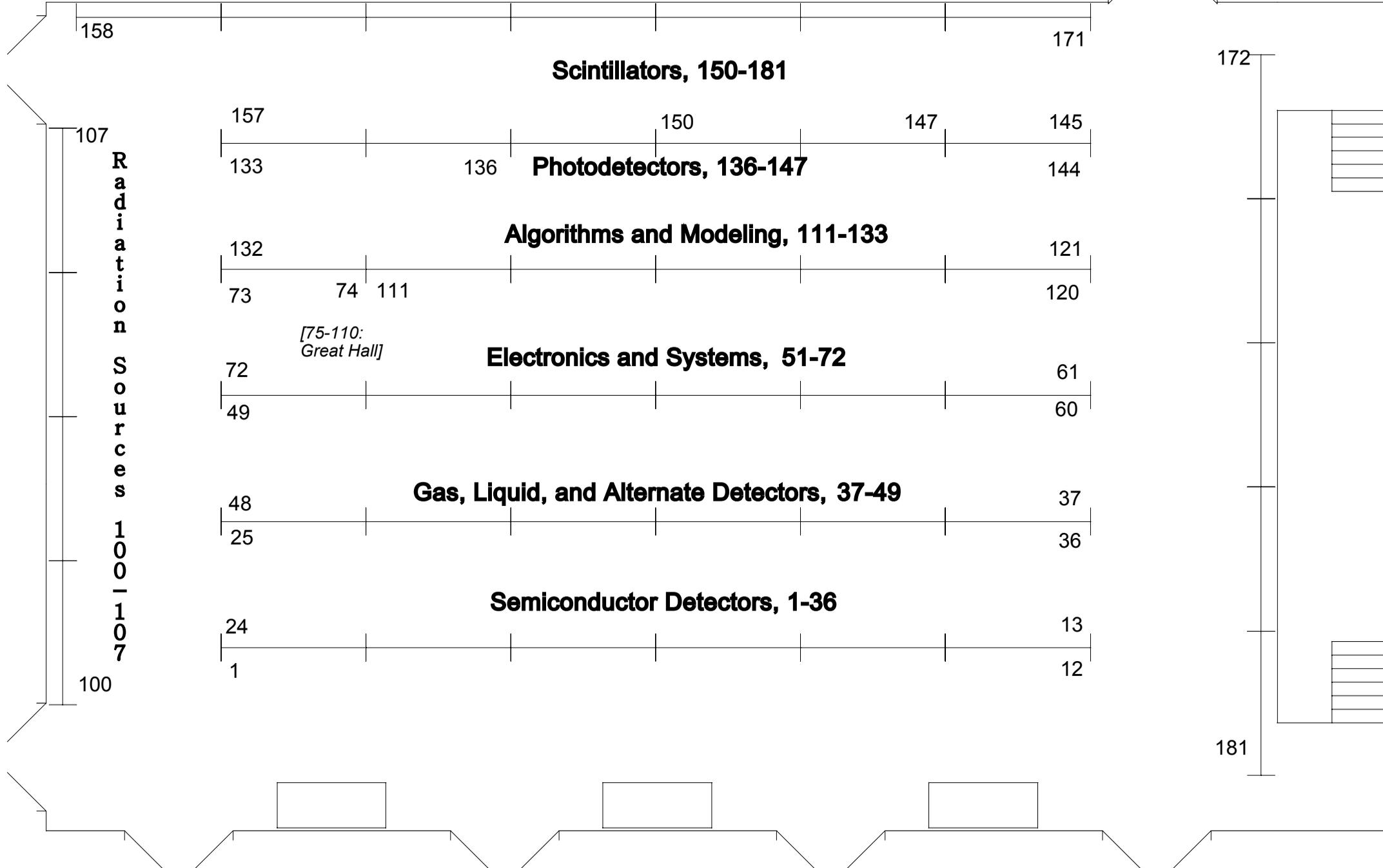
Posters 185-218

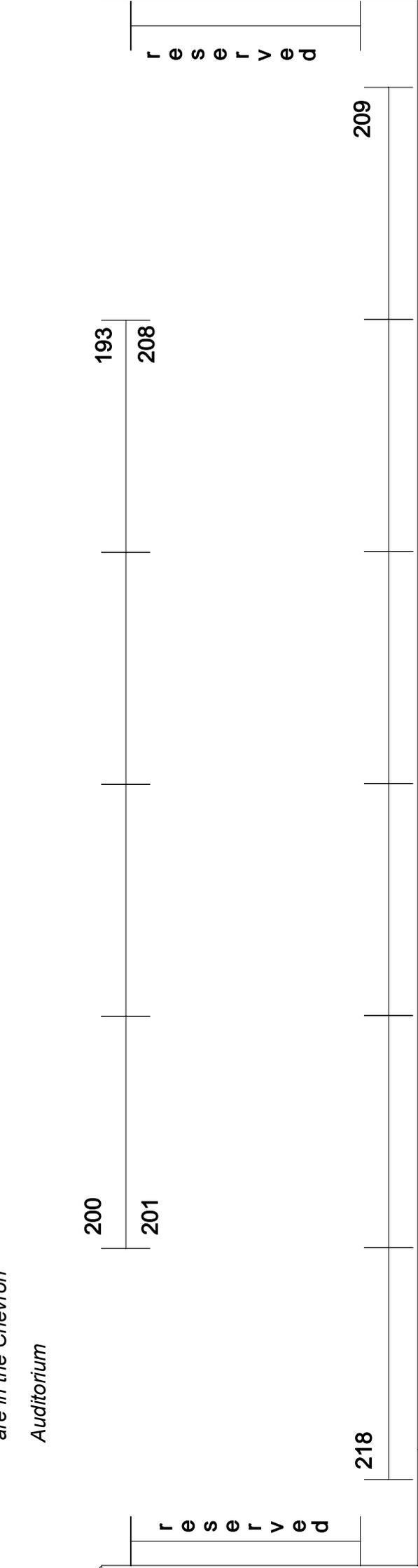
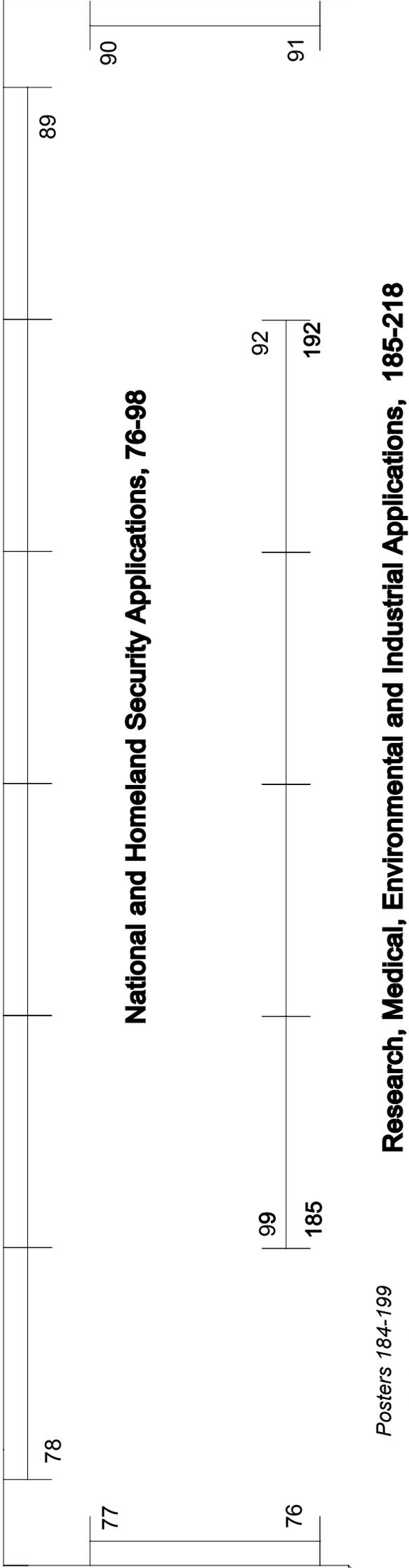
- 185 **Improved Radioxenon Gamma Spectrometry Counting System and its Efficiency Calibration: Monte Carlo Simulation and Experimental Results at Enriched Xenon Counting Environment**, *Weihua Zhang, Radiation Protection Bureau, Health Canada*
- 186 **Imaging System for XRF Microtomography at LNLS-Brazil**, *Gabriela Ribeiro Pereira, Federal University of Rio De Janeiro (UFRJ) (Ricardo Tadeu Lopes, presenting)*
- 187 **Fast Pulsed Neutron and Soft X-Ray Source For Detector Calibration**, *Mahadevan Krishnan, Alameda Applied Sciences Corporation (AASC); Brian Bures, presenting*
- 188 **Small-Angle X-Ray Scattering / USAXS/ Diffraction from Biological Samples**, *Donepudi Venkateswara Rao, Sir.C.R.R. Autonomous College*
- 189 **Novel Three-Dimensional Gamma-Ray Emission Imaging Built On Compton Scattered Radiation**, *T.T. Truong, University of Cergy-Pontoise*
- 190 **Differential Phase-Contrast Imaging Experimental System Based On Moire Deflectometry with Incoherent X-Rays**, *Zhi-Feng Huang, Tsinghua University*
- 191 **Improved Characterization of Environmental Samples**, *Kari Perajarvi, STUK-Radiation and Nuclear Safety Authority, Helsinki, Finland*
- 192 **The Application of Forward Scattering in Material Identification**, *Huaqiang Zhong, Nuctech Company Limited*
- 193 **Fast Neutron Dose Evaluation in BNCT with Fricke Gel Detectors**, *Grazia Gambarini, Department of Physics of the University and INFN, Milan, Italy*
- 194 **Gamma Cube: An Ultrahigh Resolution and Ultrahigh Sensitivity SPECT System for Tracking Radiolabeled Immune Cells in Mouse Brain**, *Geng Fu, University of Illinois*
- 195 **Radiometric Meteorology**, *Mark B. Greenfield, International Christian University*
- 196 **Special Light-Insensitive Development-Free Radiographic Film for Beam-profile Imaging**, *Fred Becchetti, University of Michigan; A. Villano, presenting*
- 198 **An Extended Solenoid-based Time-of-flight Beam Line for Low-energy Radioactive-Beam Research**, *Fred Becchetti, University of Michigan; Hao Jiang, presenting*
- 199 **Luminosity Measurement Calorimeters and Tracking Detectors for Crabbed Waist Collisions at DAFNE**, *Paolo Valente, INFN Roma; Nicolas Arnaud, presenting*
- 201 **Non-Destructive Imaging Materials Investigation by Microfocus 3D X-Ray Computed Tomography**, *Ricardo Tadeu Lopes, Federal University of Rio de Janeiro (UFRJ)*
- 202 **A Study of the Performance of the ALICE Zero Degree Calorimeters**, *Corrado Cicalo', INFN Sezione di Cagliari*
- 203 **The ALICE Dimuon Forward Spectrometer**, *Elisabetta Siddi, INFN Sezione di Cagliari*
- 204 **A Silicon Beam Tracker**, *Ji Hye Han, Univ. of Maryland (IPST) (M.H. Lee, presenting)*
- 205 **Comparative Simulation Study of I-124 and F-18 on the Three MicroPET Series Systems: Measurement of Sensitivity and Scatter Fraction**, *Jin Su Kim, Korea Institute of Radiological & Medical Science*
- 206 *Withdrawn*

- 207 **A Preliminary Study on Dual-Energy Computed Tomography for Small Animals,**
Sungho Chang, KAIST
- 208 *Withdrawn*
- 209 **Study of the Radiation Hardness of VCSEL and PIN Arrays,** *K.K. Gan, The Ohio State University*
- 210 **Investigation of the GSO Based Detection System for Continuous Blood Sampling - Simulation Study,** *JongGuk Kim, Korea Institute of Radiological And Medical Sciences*
- 211 **Registration Method for the Detection of Tumor in the Lungs and Liver Using a Multimodality Small Animal Imaging,** *Sang-Keun Woo, Korea Institute of Radiological and Medical Sciences*
- 212 **Multivariate Data Analysis for Drug Identification using Energy-Dispersive X-ray Diffraction,** *Emily Cook, University College London*
- 213 **Time-Resolved Extended X-Ray Absorption Fine Structure Using a Pixel Array Detector,** *Antonino Miceli, Argonne National Laboratory*
- 214 **Advances in Optical CT Reconstruction Imaging for FXG Dosimetry,** *Adelaide de Almeida, Universidade de Sao Paulo (USP), Brasil*
- 216 **Paterson Parker Distribution Dose Method Evaluation through the Fricke Xylenol Gel Chemical Dosimeter,** *Adelaide de Almeida, Universidade de Sao Paulo (USP), Brasil*
- 218 **¹³⁷Cs Absorbed Dose Distribution through Fricke Xylenol Gel Dosimeter Measurements ,** *Adelaide de Almeida, Universidade de Sao Paulo (USP), Brasil*

Poster Session Plan, Chevron Auditorium of International House

Poster Session I (odd numbers) 2-3:15; break 3:15-3:45; Poster Session II (even numbers) 3:45-5





Poster Session Plan, Great Hall of International House

Poster Session I (odd numbers) 2-3:15; break 3:15-3:45; Poster Session II (even numbers) 3:45-5